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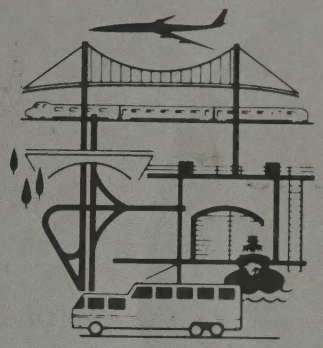
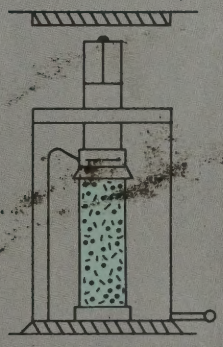
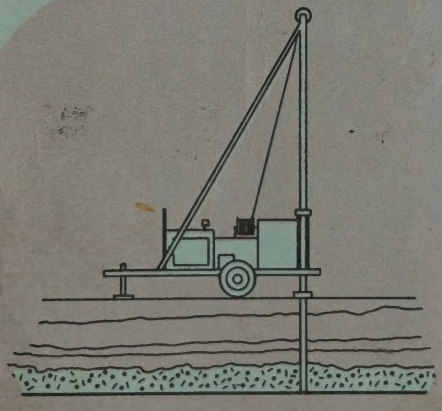
DEPARTMENT OF TRANSPORTATION

SOIL MECHANICS BUREAU

2351







REVISED

DRILL TOOL CATALOG

MAR. 1991

SM 238b (1/73)

INSTRUCTIONS FOR USE OF DRILLING EQUIPMENT CATALOG

The drill tool requests (SM 451 - 5/81) are to be used by the driller to communicate a need for equipment. The driller must familiarize himself with the proper drill tool nomenclature in order to use the catalog properly. In order to find a particular piece of equipment, it should be found under the actual name, for example, "ROD LIFTER" will be found under "LIFTER, ROD"; "WATER SWIVEL" will be found under "SWIVEL, WATER."

1. The driller enters his name, region and date.

2. The driller picks the items needed from the catalog and enters the item number, the description, and the quantity needed.

3. If the driller cannot find the item in the catalog, he should enter the complete description and quantity.

4. If special or reoccurring problems are encountered with the tools furnished, it should be noted under "Comments on Tools Furnished."

5. The request should be submitted once every two (2) weeks along with the time sheets, by the driller to the Soils Engineer for his approval and signature.

6. The gold copy of the request should be held by the Regional Soils Office.

7. The remaining copies will be forwarded to the Soil Mechanics Bureau where the items will be furnished from stock or ordered from a vendor. This will be indicated on the request, and the white copy will be returned to the driller, along with any reply to the driller's comments under "Office Use Reply."

8. The comment section may be used to request assistance on any drilling problem as well as tool problems.

9. This catalog may be updated to include items not listed approximately every twelve (12) months.

10. All catalog items are to be ordered by the driller unless otherwise indicted.

    a) A single asterisk (*) indicates items to be ordered by the Soils Office.

    b) A double asterisk (**) indicates the item is to be ordered by the Soils Office and returned to the Main Office upon completion of the job.

    c) A triple asterisk (***) indicates items to be ordered by the individual for personal use such as boots, hats, etc. (include size and color if applicable).

NYSDOT
Library
50 Wolf Road, POD 34
Albany, New York 12232

SMB
SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
10	ADAPTOR,HEAD(4 1/4" EXP. FOR THIN WALL BIT)
20	ADAPTOR,HEAD(6 1/4 EXP.FOR THIN WALL BIT)
30	ADAPTORS,(1" PVC STAB TO 1" PIPE FEMALE)
35	ADAPTORS,(1" PVC STAB TO 1"MALE PIPE)
37	ADAPTORS,3"PVC-DWV-3"PIPE
40	AUGER,IWAN 6"
50	AUGER,IWAN 4"
55	AUGER,IWAN 3"
60	AUGER,IWAN 2"
65	AUGER,DISK 4"
70	AUGER,JET (3-5/8").
80	AUGER,JET (3-5/8" WITH CALYX)
90	AUGER,JET (3-1/8")
100	AXES,SINGLE BIT
105	BAR,1.5/8 HEX,AUGER EXT.
110	BAR,JAR (2-1/2" DOUBLE EXTRA HEAVY) x 36" - Full Piece Assy. Part # 02031-12

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
120	BAR,PINCH (24")
125	BAR, POLE(6')
130	BAR,POLE (8')
140	BARREL,CORE ("AWX"S.T. 2'/AW ROD CONN)
150	BARREL,CORE ("AWX"S.T. 5'/AW ROD CONN)
160	BARREL,CORE ("AWX"D.T. 5'/AW ROD CONN)
170	BARREL,CORE ("AWM"D.T. 5'/AW ROD CONN)
180	BARREL,CORE ("BWX"S.T. 2'/BW ROD CONN)
190	BARREL,CORE ("BWX"S.T. 5'/BW ROD CONN)
200	BARREL,CORE ("BWX"D.T. 5'/BW ROD CONN)
210	BARREL,CORE ("BWM"D.T. 5'/BW ROD CONN)
220	BARREL,CORE ("NWX"S.T. 2'/NW ROD CONN)
230	BARREL,CORE ("NWX"S.T. 5'/NW ROD CONN)
235	BARREL,CORE ("NWX" D.T. 2"/"NW" ROD CONN)
240	BARREL,CORE ("NWX"D.T. 5'/NW ROD CONN)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

TALOG UMBER	DESCRIPTION OF EQUIPMENT
241	BARREL,CORE ("NWX"D.T. 10'/NW ROD CONN)
245	** BARREL,CORE(NX-SC D.T.5'/"NW" ROD CONN.)
247	BARREL,CORE ("NWM"D.T.2'/"NW" ROD CONN)
250	BARREL,CORE ("NWM"D.T. 5'/NW ROD CONN)
255	** BARREL,CORE (NXD4 5' CHRISTENSEN /"NW"ROD CONN)
257	** BARREL,CORE("NQ"2" WIRELINE LONGYEAR D.T.5)
258	** BARREL,CORE("NQ"2 WIRELINE 10')
260	BARREL,CORE ("HWX"S.T. 5'/NW ROD CONN)
270	BARREL,MAIN (1" R.P.S.)
290	BEARING,"AWX"/"AWM" CORE BARREL (SET)
300	BEARING,"NWX"/"NWM" CORE BARREL (SET)
320	BENTONITE,(QUICK-GEL-VOLCLAY-PWD/GRAN)
330	BINDER,(3/8" CHAIN)
335	BIT,CASING SHOE,"AW"(CRACKER JACK)
340	BIT,CASING SHOE "BW" (PYRAMID TYPE)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
345	BIT,CASING SHOE "BW"(CRACKERJACK TYPE)
360	BIT,CASING SHOE "NX"(PYRAMID TYPE)
364	BIT,CASING SHOE "NW"(CRACKER JACK)
365	BIT,CASING SHOE "NW"(PYRAMID TYPE)
370	BIT,CASING SHOE "HW"(PYRAMID TYPE)
375	BIT,CASING SHOE "HW"(CARBIDE SAWTOOTH)
380	BIT,CHOPPING("AW" CONN.-2-1/8 WIDTH)
384	BIT,CROSS CHOPPING("AW"CONN.-1-3/4"WIDTH)
390	BIT,CHOPPING("NW" CONN.-3-1/4 WIDTH)
400	BIT,DRAG 2-1/4"(QUARRY BIT)
410	BIT,DRAG 3-1/2"(QUARRY BIT)
420	BIT,"AX/AWG"CARBIDE INSERT (PYRAMID CORING)
421	BIT,"AX" CARBIDE(CRACKER JACK)
430	BIT,"AXM" CARBIDE INSERT(PYRAMID CORING)
440	BIT,"BX" CARBIDE INSERT(PYRAMID CORING)
441	BIT,"BX"CARBIDE INSERT(CRACKER JACK CORING)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
445	BIT,CONICAL(2&1/4 I.D. AUGERS, CME)
450	BIT,"BXM" CARBIDE INSERT(PYRAMID CORING)
460	BIT,"NX" CARBIDE INSERT(PYRAMID CORING)
461	BIT,CARBIDE CORING("NX" CRACKERJACK)
470	BIT,"NXM" CARBIDE INSERT(PYRAMID CORING)
480	BIT,"HX" CARBIDE INSERT(PYRAMID CORING)
490	* BIT,4-1/4"(THIN WALL)
500	* BIT,6-1/4"(THIN WALL)
505	BIT,ROLLER 2-15/16"
510	BIT,ROLLER 3-1/4"("NW" CONN.)
520	BIT,ROLLER 3-1/2"(2-3/8" API CONN.)
530	BIT,ROLLER 3-3/4"(2-3/8" API CONN.)
540	**BIT,ROLLER 4-1/2"(2-3/8" API CONN.)
550	**BIT,ROLLER 5-5/8"(3-1/2" API CONN.)
560	BIT,SAWTOOTH("AX")

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
570	BIT,SAWTOOTH("NX")
575	BLADES,(CUTTER FOR CME)
580	BLADES,(CUTTER FOR MOBILE-EA.)
590	BLADES,HACKSAW 12"(18,24,32 TPI)
600	BLADES(HAWTHORNE MP200)
610	BLADES(HAWTHORNE-MP400)
615	BLOCKS,CABLE (SNATCH 8")
620	BLOCK,ROPE(SNATCH 6")
622	BLOCK,ROPE(SNATCH 8")
625	BLOCK,(SET 3X2 HOISTING)
628	BOLTS (FOR CME AUGERS)
630	BOLTS,(FOR MOBILE CUTTER BLADES-EA.)
640	BOLTS,EYE(ACKER HAMMER 300 LB.)
650	BOLTS,EYE(S&H HAMMER 300 LB.)
660	*** BOOTS,(HIP),SIZE 6

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

ATALOG UMBER	DESCRIPTION OF EQUIPMENT
661	*** BOOTS,(HIP) SIZE 7
662	*** BOOTS,(HIP) SIZE 8
663	*** BOOTS,(HIP) SIZE 9
664	*** BOOTS,(HIP) SIZE 10
665	*** BOOTS,(HIP) SIZE 11
666	*** BOOTS,(HIP) SIZE 12
667	*** BOOTS,(HIP) SIZE 13
668	*** BOOTS,(HIP) SIZE 14
670	*** BOOTS,(KNEE HIGH) SIZE 6
671	*** BOOTS,(KNEE HIGH) SIZE 7
672	*** BOOTS,(KNEE HIGH) SIZE 8
673	*** BOOTS,(KNEE HIGH) SIZE 9
674	*** BOOTS,(KNEE HIGH) SIZE 10
675	*** BOOTS,(KNEE HIGH) SIZE 11
676	*** BOOTS,(KNEE HIGH) SIZE 12
677	*** BOOTS,(KNEE HIGH) SIZE 13

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
678	*** BOOTS,(KNEE HIGH) SIZE 14
680	BOULDERBUSTER,(2-1/4")
690	BOULDERBUSTER,(3-1/2")
700	BOWL,LOCKING MP-200(AW)
710	BOWL,LOCKING MP-400(NW)
720	BOX,(TOOL 24")
730	BRUSHES,(WIRE)
750	CABLES,JUMPER
760	CANS,(GAS-5 GALLON JUST RITE SAFETY)
.765	CANS,OIL(PUSHBOTTOM OILERS 1 PT.)
775	CAPS,DRIVE(CME)2-1/4"AUGER"
* 777	- CAP, DRIVE Mobile 3 3/8" x 8 1/4" Hollow Flight AUGER
780	CAPS,(3") BRASS
790	CAPS,(3-1/2" LINER)
795	CAPS(SI 3.34)
800	CAP,(PVC 3" PRESS TYPE)

* NEW ITEM (NOT ON COMPUTER)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

TALOG UMBER	DESCRIPTION OF EQUIPMENT
801	CAP,PVC(1" PIPE THREAD)
810	CAPS,(3-1/2" SHELBY TUBE)
820	CARTRIDGE,(WATER PUMP GREASE) — ORDER 6 DOZ. CK. w/STEVE
830	CASE,LIFTER("AWM")
840	CASE,LIFTER("BWM")
850	CASE,LIFTER("NWM")
855	CASE LIFTER(NXD-4)
860	CASING,(1"R.P.S.3' EACH)
865	CASING,"AW"(5'LENGTHS)
870	CASING,"BW"(1' LENGTHS)
880	CASING,"BW"(2' LENGTHS)
890	CASING,"BW"(5' LENGTHS)
912	CASING,"NW"(1' LENGTH)
915	CASING,"NW"(2' LENGTHS)
917	CASING,"NW"(5' LENGTHS) ✓

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
920	CASING,"NX"(2' LENGTHS)
930	CASING,"NX"(5' LENGTHS)
940	CASING,"HW"(1' LENGTH)
950	CASING,"HW"(2' LENGTH)
960	CASING,"HW"(5' LENGTH-EA.)
962	** CASING,"PW"(2'LENGTHS)
963	** CASING,"PW"(5'LENGTHS)
970	CHAIN,(24" CHAIN WRENCH)
980	CHAIN,LOGGING(3/8"-16' LONG W/HOOKS)
985	CHAIN,1/4"(6' LENGTH). 00
990	CHAIN,TIE DOWN(DOZER ONLY)
1001	CHISEL,(1/4")
1002	CHISEL,(5/16")
1003	CHISEL,(1/2")
1004	CHISEL,(5/8")
1005	CHISEL,(3/4")

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

ALOG MBER	DESCRIPTION OF EQUIPMENT
1006	CHISEL,(1/2" EXTRA LONG)
1007	CHISEL, (3/4" EXTRA LONG)
1008	CHISEL, (7/8")
1009	CHISEL(1")
.010	CLAMPS,(1" DISCHARGE HOSE BOLTED) ✓
.012	CLAMPS,3/4"(DISCHARGE HOSE)
020	CLAMPS,(1"PLASTIC HOSE)
030	CLEANER,(HAND 1 LB. CANS-CREAM)
050	CONE,LOCKING(STA.PIST.SAMP.)
060	CONNECTION,(3/4" THREADED MALE SNAP ON)
070	CONNECTION,(3/4" THREADED FEMALE SNAP ON) X
080	CONNECTION,(1" THREADED MALE SNAP ON) X
090	CONNECTION,(1" THREADED FEMALE SNAP ON) X
100	CONNECTION,(1-1/2" SUCTION MALE & FEMALE)
110	CONNECTION,(SNAP ON 3/4" HOSE)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
1120	CONNECTION,(SNAP ON 1" HOSE)
1130	CONNECTION,"AW"-MP200
1140	CONNECTION,"NW"-MP400
1150	CONNECTOR,SPECIAL(SAMPLER ADAPTER)
1160	COUPLINGS,("AW" ROD)
1165	COUPLING,("BW" ROD)
1170	COUPLINGS,("NW" ROD)
1180	* COUPLINGS,(1"PVC)
1185	* COUPLINGS,(3"PVC-DWV)
1190	* COUPLINGS,(3"PVC)
1195	COUPLINGS,(SI3.34")
1200	COUPLINGS,(1/2" PIPE)
1210	COUPLING,(3/4" PIPE)
1220	COUPLING,(1" PIPE)
1230	COUPLING,(2-1/2" PIPE)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

ALOG MBER	DESCRIPTION OF EQUIPMENT
1240	COUPLINGS,(4" PIPE)
1250	COUPLINGS,(6"PIPE)
1260	COUPLINGS,("BX CASING)
1270	* COUPLINGS,("NX"CASING)
1280	COUPLING,REDUCED(1-1/4"X1-1/2")
285	CUPS, 3-1/2" LEATHER PISTON SAMPLE
290	* DIGGER,(POST HOLE -LONG HANDLES)
300	DISCONNECT,(QUICK HYD. PARKER-HANNIFIN)
310	FILE,8"(3 CORNERED)
312	FILE,8"(3 CORNERED-SMOOTH)
314	FILE,8"(FLAT-SMOOTH)
315	FILE,8"(ROUND FLAT BASTARD)
316	FILE,8"(ROUND-SMOOTH)
318	FILE,8"(SQUARE-SMOOTH)
320	FILE,12"(FLAT BASTARD)
330	FILE,12"(FLAT FINE)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
1340	FILE,12"(HALF ROUND SMOOTH)
1344	FILE,(HALF ROUND 12" BASTARD)
1350	FILE,12"(ROUND BASTARD)
1360	FILE,12"(ROUND SMOOTH)
1370	FLAGGING,(RED PINK ROLLS)
1380	* FLAGGING,(YELLOW ROLLS)
X 1383	FLIGHTS,(2-1/4"HOL. 2' LENGTHS)
X 1384	FLIGHTS,(2-1/4"X6-1/4" HOL. 5' LENGTHS)
XX 1389	FLIGHTS,(3-3/8"X8-1/4" HOL. 2' LENGTHS)
1390	FLIGHTS,(3-3/8" HOL. 5' LENGTHS-MOBILE)
1400	FLIGHTS,(4"SOL.,5' LENGTHS-MOBILE)
1415	FUNNEL,(JUST-RITE, POUR)-GREY ON YELLOW
1417	FORK, AUGER 2¼" HSA THRT # 2LC 54-R1, AA, 45, L6
1419	FUNNEL,(10 QT. CAPACITY)
1420	GUAGE,(FEELER)
1430	GUAGE,(MINERAL FILLED)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

ALOG MBER	DESCRIPTION OF EQUIPMENT
1440	GASKETS,(SUCTION HOSE 1-1/2" LEATHER)
1450	GASKETS,(SUCTION HOSE 1-1/2" NEOPRENE)
1453	GASKETS(SUCTION 2"NEOPREME)
1454	GIMBEL,(1.58 "HEX-1.58"HEX)
1455	*** GLASSES,(SAFETY)
1460	* GLUE,(PVC-PT. OR 1/2 PT.)
1470	GREASE,(WATERPUMP-DARMEX)
1480	GROMMETS,(1" AIR HOSE FITTINGS)
1490	GUN,GREASE(LEVER HANDLE)
1500	HACKSAW,(FRAME)
1510	* HAMMER,(1"R.P.S.)
1520	HAMMER,(CLAW-STRAIGHT-CARPENTER)
1524	HAMMER,RUBBER
1530	HAMMER,(DRILLER-3 LB.)
1532	HAMMER,POINTED(FOR C.M.E.) -R1, A, 9, 4E, 4, B2

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
1540	HAMMER,BALL PEIN(8 OZ.)
1550	HAMMER,BALL PEIN(12 OZ.)
1560	* HAMMER,(SLEDGE-6LB.)
1570	HAMMER,SLEDGE(8 LB.)
1580	HAMMER,(300 LB.)
1590	HANDLE,AXE SINGLE BIT
1600	HANDLE,PICK
1610	HANDLE,SLEDGE HAMMER
1620	HASP,(4")
1630	HEAD,ADAPTOR(MOBILE FLIGHTS)
1635	HEAD,CUTTER(2-1/4"CME) Hollow Auger
1636	HEAD,CUTTER(BULLDOG 6-1/4)
1640	HEAD,DRIVE(2-1/2"X2-1/2" "AW" ROD)
1644	HEAD,SAMPLER,(2" SPLIT BARREL)
1650	HEAD,DRIVE(4" PIPE)
1655	HEAD,DRIVE(4"PIPE W/NW ROD BOX)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

ALOG MBER	DESCRIPTION OF EQUIPMENT
1660	HEAD,DRIVE("BW")
1670	HEAD,DRIVE("HW")
1675	HEAD,DRIVE("NW")
1677	** HEAD,DRIVE(PW CASING)
1680	HEAD,SHELBY(3-1/2")
1684	HEAD,CUTTER(FINGER TYPE 6-1/4"X2-1/4")
1690	HEAD CUTTER, MOBILE FLIGHT(3-3/8"X8-1/4")
1691	HEAD,CUTTER(BULLDOG TYPE 8-1/4"X3-3/8")
1700	HEATER,(SPACE-SALAMANDER)
1710	*** HELMET,(SAFETY-FIBER GLASS)
1715	*** HELMET,(SAFETY-PLASTIC)
1720	HITCHPIN,HAIRPIN(1/8"X2-9/16")
1730	HITCHPIN,HAIRPIN(3/16"X3-1/4")
1734	HOLDER,CRAYON
1735	HOOK,HOISTING(CME AUGER)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
1740	HOOK,ROD("AW")
1750	HOOK,ROD("NW")
1755	HOOK, SAFETY
1760	HOSE,(1" BRAIDED AIR -L.F.)
1765	HOSE (1-1/4" AIR C.M.E.)
1770	HOSE,(1-1/2" SUCTION 20' LENGTHS) PLASTIC
1772	HOSE, (1-1/2" SUCTION 20' LENGTHS)-RUBBER
1775	HOSE, 2" SUCTION (MOYNO PUMP)
1780	HOSE,(8' FOR PROPANE TANKS)
1790	JACK,(1" R.P.S.)
1800	JACK,(4 TON-FOR RIGS)
1810	JAWS,(HEEL 14" W/PINS)
1820	JAWS,(HOOK 14")
1830	JAWS,(HEEL 18" W/PINS)
1840	JAWS,(HOOK 18")

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

ALOG MBER	DESCRIPTION OF EQUIPMENT
1850	JAWS,(HEEL 24" W/PINS)
1860	JAWS,(HOOK 24")
1870	JAWS,(HEEL 36" W/PINS)
1880	JAWS,(HOOK 36")
1881	JAWS, FOR RIGID PIPE VISE (1/8" - 4")
1883	JAWS,3"(PIPE RETRIEVER)
1884	JAWS, 2-1/2" PIPE RETRIEVER
1885	JAWS, 4" PIPE RETRIEVER
1890	JUGS, WATER (2 GAL)
1900	KEIL,(BOX)
1910	LATCH KIT,(SAFETY HOOK)
1920	LEVEL,(CARPENTER'S 24")
1930	LIFTER,CORE("AX")
1940	LIFTER,CORE("BX")
1950	LIFTER,CORE("HX")
1960	LIFTER,CORE("NX")

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
1970	LIFTER,CORE("AXM")
1980	LIFTER,CORE("BXM")
1985	LIFTER,CORE(CHRISTENSEN)
1990	LIFTER,CORE("NXM")
2000	LIFTER, ROD "AW"(CLOSED)
2010	LIFTER, ROD "AW"(OPEN)
2020	LIFTER, ROD "NW"(CLOSED)
2030	LIFTER, ROD "NW"(OPEN)
2040	*** LINERS,(SAFTY HELMET)
2050	LINERS,(SS-3" WITH CAPS)
2060	LOCKS,(PADLOCK KEYED ALIKE)
2065	LOCKS,OAR(PR)
2070	LUBRICANT,(15 LB. PAIL)
2075	*** MUFFS, HUSH
2080	NIPPLES,CLOSE(1-1/4")

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
2082	NOSE,PIPE RETRIEVER
2083	NUT, 12" PIPE WRENCH (NEW NUMBER)
2084	NUT, 18" PIPE WRENCH
2085	NUT, 24" PIPE WRENCH
2090	OARS,(6-1/2' PAIR)
2100	PACKING,(PALMETTO 1# BOX/WATER SWIVELS)
2105	PICK
2110	PIN,(DRIFT 12" LONG)
2115	PIN,DRIVE(CME AUGER)
2120	PIPE,(1/2" 3' LONG L.F.)
2130	PIPE,(3/4" AUGER-L.F.)
2140	PIPE,(1" PVC 10' LENGTHS-L.F.)
2145	PIPE PVC3"DWV L. F.
2150	PIPE,(PVC 3" L.F.)
2154	PIPE,(PVC 3")
2155	PIPE,SLOPE INDICATOR 3"-10' LONG

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
2156	PIPE,SLOPE INDICATOR 3"-5' LONG
2160	PIPE, 2-1/2"(5' LENGTHS)
2170	PIPE,4" (5' LENGTHS)
2180	** PIPE,6"(2' LENGTHS)
2190	** PIPE,6"(5' LENGTHS)
2200	PLIERS,(NEEDLE NOSE)
2210	PLIERS,(SIDE CUTTER)
2220	PLIERS,(SLIP JOINT 6")
2222	PLIERS,(SLIP JOINT 8")
2230	PLIERS,VISE GRIP 7")
2240	PLIERS,(VISE GRIP 10")
2250	PLIERS,(WATER PUMP 10")
2260	* PLUGS,(1"PVC THREADED)
2263	PLUGS,(3" PVC DWV THREADED)
2265	PLUGS 4" BRASS PIPE
2270	PLUG HOIST,("AW" CONN.)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
2280	* POINTS,(POIN JAR 1"DIA. X1 METER LONG)
2290	PROPANE GAS,(FILLUPS PER 20 LB. TANK)
2300	PUNCH,(CENTER)
2310	PUNCH,(DRIFT PIN [illegible]) 5/16" X 5/32"
2312	" " " 3/8" X 3/16"
2315	Punch, DRIFT PIN 7/16" x 7/32"
2320	PUNCH,(DRIFT PIN [illegible]) 2320- " " " 1/2" x 1/4"
2340	RETAINER,FLAP(1-3/4")
2350	RETAINER,FLAP(2")
2360	RETAINER,FLAP(3")
2370	RETAINER,FLAP(3-1/2")
2380	RETAINER,L.A.D.(2")
2390	RETREAVER,PIPE("AW" CONN.)
2400	RING,"O"(N&N SWIVEL)
2401	RING,"O"(HYD. SAMPLER)
2405	RING, 2 1/4" Hollow Flight Auger
2410	RING,DRIVE(2_1/2" JAR BAR)
2415	RING,DRIVE 2-1/2" MODIFIED JAR BAR

SMB
SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
2420	RING,ROD("AW")
2430	RING,ROD("NW")
2440	* ROD,ACTUATING(2'LENGTHS)
2450	* ROD,ACTUATING(3'LENGTHS)
2460	* ROD,ACTUATING(5'LENGTHS)
2470	* ROD,ACTUATING(10'LENGTHS)
2480	* ROD,"1" R.P.S. (3'EACH)
2490	ROD,"AW"(1' LONG EACH)
2500	ROD,"AW"(2' LENGTH EACH)
2510	ROD,"AW"(5' LONG EACH)
2520	ROD,"AW"(10' LONG EACH)
2525	ROD,"BW"(5' LONG EACH)
2530	ROD,"NW"(2' LENGTHS EACH)
2535	ROD NW (3'LONG EACH)
2540	ROD,"NW"(5' LENGTHS EACH)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
2550	ROD,"NW"(10' LENGTHS)
2560	* ROD,PION JAR(1" DIA.X1 METER LONG)
2570	ROPE,NYLON(1/4" BRAIDED-PUMP ROPE-L.F.)
2580	* ROPE,MANILA(1/4" BALE)
2590	* ROPE,MANILA(1/2" BALE) X
2600	* ROPE,MANILA(3/4" BALE) X
2605	ROPE,3/4" NYLON (FOR RAFT ANCHORS)
2610	* ROPE,MANILA(1"BALE) X
2630	RULERS,(6'WOOD)
2660	SAMPLER,(1-3/4" SOLID)
2670	SAMPLER,(2" H.D. SPLIT-WITH PLUG)
2675	SAMPLER,A00 2" SOLID MOBILE
2690	SAMPLER,(2" LYNAC)
2700	SAMPLER,(2" E-Z OPEN)
2710	** SAMPLER,(2"X42"LONG SOLID BARREL)
2720	SAMPLER,(3" SPLIT)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
2730	SAMPLER,(3-1/2" SPLIT FOR LINER)
2740	SAMPLER,(3-1/2" SOLID 36" LONG)
2750	* SAMPLER,(STATIONARY PISTON 3")
2760	* SAMPLER,(STATIONARY PISTON 3 1/2")
2770	SAW,(BOW 24")
2780	SAW,(CARPENTER)
2790	SCREW,(SHELBY HEAD)
2802	SCREWDRIVER, 4" BLADE
2804	SCREWDRIVER, 6" BLADE
2805	SCREWDRIVER,(CABINET TYPE)
2806	SCREWDRIVER, 8" BLADE
2812	SCREWDRIVER,PHILIPS 2PT. 1" SHORT
2814	SCREWDRIVER,PHILIPS 2PT. 4" SHORT
2820	* SHANK,(PION JAR IMPACT)
2830	SHEARS,(LOPPING)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
2840	SHELL,REAMING('AWX' BLANK ST)
2850	SHELL,REAMING('BWX' BLANK ST)
2860	SHELL,REAMING('NWX' BLANK ST)
2870	SHELL,REAMING('HX' BLANK ST)
2880	SHELL,REAMING('AWX' BLANK DT)
2890	SHELL,REAMING('BWX' BLANK DT)
2895	SHELL,REAMING("NXD3")
2900	SHELL,REAMING('NWX' BLANK DT)
2910	SHELL,REAMING('AWM' BLANK)
2920	SHELL,REAMING('BWM' BLANK)
2930	SHELL,REAMING('NWM' BLANK)
2935	SHOE,DRIVE("AW"CASING)
2940	SHOE,DRIVE("BW"CASING)
2955	SHOE,DRIVE("NW"CASING)
2960	SHOE,DRIVE("HW"CASING)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
2963	** SHOE,DRIVE("PW"CASING)
2970	SHOE,SAMPLER(1-3/4")
2980	SHOE,SAMPLER(2" HD)
2990	SHOE,SAMPLER(2" LYNAC)
2995	SHOE,SAMPLER(2" A.D.O.)
3000	SHOE,PIPE(2-1/2")
3010	SHOE,PIPE(4")
3020	SHOE,SAMPLER(3")
3030	SHOE,SAMPLER(3-1/2")
3040	SHOVEL,LONG HANDLE ROUND POINT
3050	SHOVEL,LONG HANDLE SQUARE POINT
3060	SHOVEL,SHORT HANDLE ROUND POINT
3070	SHOVEL,SHORT HANDLE SQUARE POINT
3075	SOCKET,3/8", 1/2" DRIVE
3076	SOCKET 7/16",1/2" DRIVE
3077	SOCKET,1/2",1/2"DRIVE

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
3078	SOCKET,9/16",1/2" DRIVE
3079	SOCKET,5/8",1/2" DRIVE
3080	SOCKET,(3/4" SPARK PLUG) 1/2" DRIVE
3090	SOCKET,(7/8" SPARK PLUG) 1/2" DRIVE
3100	SOCKET,(13/16" SPARK PLUG) 1/2" DRIVE
3102	SOCKET 1" " " " "
3104	SOCKET 1 1/16" " " " "
3106	SOCKET, 1 1/8" " " "
3110	SPOUTS,(5 GAL. GAS CAN)
3114	SPRINGS, 18" PIPE WRENCH (SETS)
3115	SPRINGS, 24" PIPE WRENCH (SETS)
3120	SPRINGS,(L.A.D. BASKET RETAINER)
3130	SPRINGS,LOCKING CONE
3160	* STAKES(1"X 1"X 48")
3190	STAKES,WIRE (2')
3200	STRAINER,PLASTIC
3205	STRAP,SAFETY (GAS CAN) X
3210	SUB,("AW" ROD BOX TO 2-1/2"PIPE PIN

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
3215	SUB,("AW" ROD BOX TO "A" ROD PIN)
3220	SUB,("AW" ROD BOX TO "BW" CASING PIN)
3225	SUB (AW ROD BOX TO BX CASING PIN
3230	SUB,("AW" ROD BOX TO "BW" ROD PIN)
3232	(AW ROD BOX TO BW ROD BOX)
3240	TAP,(AW ROD BOX TO NW ROD O.D.)
3250	SUB,("AW" ROD BOX TO "NW" ROD PIN)
3260	SUB,("AW" ROD BOX TO "NX" CASING PIN)
3265	SUB,("AW" ROD BOX TO "NW" CASING PIN)
3290	SUB,("AW" ROD BOX TO 11/4"X7"THREAD PIN)
3302	SUB ("AW" ROD PIN TO NW ROD PIN)
3310	SUB,("BW" CASING BOX TO "AW" ROD PIN)
3314	SUB,("BW" CASING BOX TO NW" CASING PIN)
3315	SUB,("BW" CASING BOX TO "NW" ROD PIN)
3320	SUB,("BW" CASING PIN TO 2-1/2" PIPE PIN)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
3325	SUB ("NW" CASING BOX TO "NX" CASING BOX)
3327	SUB,("NW" CASING BOX TO "NX" CASING PIN)
3330	SUB,("NW" ROD BOX TO "AW" ROD PIN)
3331	SUB ("NW" ROD BOX TO "BW" CASING PIN)
3332	SUB,("AW" ROD BOX TO"NW" ROD BOX))
~~3337~~	~~SUB,("NW" ROD BOX TO "BW" CASING PIN)~~
3340	SUB,("NW" ROD BOX TO "N" ROD PIN)
3345	SUB ("NW" ROD BOX TO "NW" CASING PIN)
3350	SUB,("NW" ROD BOX TO "NX" CASING PIN)
3360	SUB,("NW" ROD BOX TO 2-1/2" PIPE PIN)
3370	SUB,("NW" ROD BOX TO "HW" CASING PIN)
3380	SUB,("NW" ROD BOX 2-3/8" A.P.I.)
3390	SUB,("NW" ROD BOX TO 3-3/8" A.P.I.)
3391	SUB,("NW" ROD BOX TO 3-1/2" A.P.I.)
3400	SUB,(1-1/4"X7 THREAD BOX TO "AW" ROD PIN)
3405	SUB,(1,5/8 HEX PIN TO NW" ROD PIN

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
3410	SUB,("HW" CASING PIN TO 4" PIPE PIN)
3415	SUB,(BELL REDUCED)2-1/2" PIPE PIN TO 4" PIPE PIN
3417	"NW" ROD BOX TO "PW" CASING PIN
3420	SWIVEL,WATER(KING TYPE)
3430	SWIVEL,WATER(PLAIN TYPE)
3435	SWIVEL,WATER-SIDE FEED
3440	"T","BW" CASING
3444	"T","NW" CASING
3445	"T","HW" CASING
3446	"T",2-1/2" PIPE
3447	"T" 2 1/4" Auger
3450	"T",4" PIPE
3452	"T" 6" PIPE
3455	TANK,PROPANE(20 LB.).
3470	TAP,(FISHING "AW" COUP. I.D.)
3480	TAP,(FISHING "AW" COUP. O.D.)

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
3490	TAP,(FISHING "AW" ROD I.D.)
3500	TAP,(FISHING "AW" ROD O.D.)
3510	TAP,(FISHING "NW" COUP. I.D.)
3520	TAP,(FISHING "NW" COUP. O.D.)
3530	TAP,(FISHING "NW" DRILL ROD I.D.)
3540	TAP,(FISHING "NW" DRILL ROD O.D.)
3545	TAP,INSERT(CME AUGER) R1, A9, 4E, 46, B6
3550	TAPE,(FRICTION)
3560	TAPE,(PLASTIC)
3570	TARP,(PLASTIC 8'X10')
3575	TARP, TRUCK (14'X16')
	Tooth, AUGER listed under BLADES #575
3580	TORCH,(PROPANE COMPLETE)
3582	TORCH-TIP
3587	** TUBE,INNER,(CHRISTENSEN)
3590	TUBE,INNER("AWX" 5')

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
3600	TUBE,INNER("BWX" 5')
3605	** TUBE,INNER(CHRISTENSEN SPLIT)
3610	TUBE,INNER("NWX" 5')
3620	TUBE,INNER("AWM" 5')
3630	TUBE,INNER("BWM" 5')
3640	TUBE,INNER("NWM" 5')
3650	TUBE,OUTER("AWX" 5')
3660	TUBE,OUTER("BWX" 5')
3670	TUBE,OUTER("NWX" 5')
3680	TUBE,OUTER("AWM" 5')
3690	TUBE,OUTER("BWM" 5')
3700	TUBE,OUTER("NWM" 5')
3705	TUBE, OUTER "NW"(D-4 CRISTENSEN)
3710	TUBE, LEXAN(FOR "Z" GUAGE L.F.)
3715	TUBE,LEXAN 1-1/2" (CME)
3720	TUBE,SHELBY(3-1/2")

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
3721	VALVE,CHECK(BRASS 1")
3730	VALVE,(BALL COCK 1")
3740	VALVE, DEMAND(PROPANE)
3750	VALVE,(3/4" GATE)
3760	VALVE,FOOT,(1-1/2"-~~PLASTIC~~ BRASS)
3765	VALVE,RELIEF(3/4")
3766	*** VEST, SAFETY
3767	** VEST, FLOATING
3770	VISE,(PIPE 4" CAPACITY)
3780	WAX,(MIXED LBS.)
3785	** WIPERS,RUBBER("NW"ROD)
3790	WRENCH,ALLEN(SET)
3800	WRENCH,ALLEN(1/4")
3810	WRENCH,(CHAIN 12")
3820	WRENCH,(CHAIN 18")

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

CATALOG NUMBER	DESCRIPTION OF EQUIPMENT
3830	WRENCH,(CHAIN 24")
3840	WRENCH,(CHAIN 36")
3850	WRENCH,(CRESCENT 6")
3860	WRENCH,(CRESCENT 8")
3870	WRENCH,(CRESCENT 12")
3880	WRENCH,CHUCK(S&H 3/4")
3882	WRENCH,6" PIPE
3890	WRENCH,8" PIPE
3900	WRENCH,14" PIPE
3910	WRENCH,18" PIPE
3920	WRENCH,24" PIPE
3930	WRENCH,36" PIPE
3936	WRENCH,OPEN END BOX COMBO(1/4")
3937	WRENCH,OPEN END BOX COMBO(5/16") ~~3960~~
3938	WRENCH,OPEN END BOX COMBO(3/8")

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SUBSURFACE EXPLORATION SECTION
DRILL TOOL CATALOG

TALOG MBER	DESCRIPTION OF EQUIPMENT
3939	WRENCH,OPEN END BOX COMBO(7/16")
3940	WRENCH,OPEN END BOX COMBO(1/2")
3950	WRENCH,OPEN END BOX COMBO(9/16")
3951	WRENCH,OPEN END BOX COMBO(5/8")
3952	WRENCH,OPEN END BOX COMBO(11/16")
3953	WRENCH,OPEN BOX COMBO(3/4")
3954	WRENCH,OPEN END BOX COMBO(7/8")
3960	WRENCH,OPEN END BOX COMBO 15/16"
3961	WRENCH,OPEN END BOX(1")
3962	WRENCH,OPEN END BOX(1 1/16")
3963	WRENCH,OPEN END BOX (1-1/8")
3964	WRENCH,OPEN END BOX(1-1/4")
3980	WRENCH,RATCHET(1/2" DRIVE)
3985	" " (3/4" DRIVE) NEW NUMBER
3990	WRENCH,SOCKET SET (1/2" DRIVE)

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